FOR OFFICIAL USE ONLY

Scientific:

ACCESS DB # 1111110
PLEASE PRINT CLEARLY

Scientific and Technical Information Center

### SEARCH REQUEST FORM

·	SEARCH REQUE	SI FORM	
Requesion's Full Name: BEN Art Unit: 1636 : Done N Location (Blig Topona): 1045 B3/(N	SACK	aminer # : 73489 Date: 11/15/05 Serial Number: 10 / 698, 45/ dis Format Preferred (circle) PAPOR DISH	- K *
To ensure an efficient and quality search, pl	ease attach a copy of the cover sh	neet, claims, and abstract or fill out the following:	
Title of Invention Basic S	salt & thin	octic acid with L- com	tine
Inventors (please provide full of des): _	Salvi et .	actic acid with L- Carner	
Earliest Priority Date:			
Search Topic: Please prevaile a detailed statement as inexesti- elected species or sore times, beyone. Committeefine any cemental may be seen appeal mea	ems, acronyms, and registry numb	illy as possible the subject matter to be searched. Include was, and combine with the concept or utility of the invent grations, authors, etc., if known.	e the tion.
*For Sequence Searches Only* Please inclus	le all pertinent information (paren	it, child, divisional, or issued patent numbers) along with	the
appropriate servet number.  A Salt & L	moctic ació	d, child, divisional, or issued patent numbers) along with	; &
A Y (X)x	CH3 H3c-13-0H LH3 -e as defin		
share X and 7 or	-e as 0 0	•	
		SCIENTIFIC REFERENCE Sci 2 rech Inf · Cnt-	· BR
- h.c		NOV 1 6 RELU	
ments.		Pat. & T.M. Office	
		7 di. d. 7.iii. 01 0g	
· 农大会亲亲们我先来被害我亲亲世界上前来为老老的亲亲以我们是我来说你出	老衣的老者为为女女的女女的女女的女女女女的女的女	**************************************	
STAFF USE XI Fully	Type of Search	Vendors and cost where applicable	
•	NA Sequence (#)	STN Dialog	
Searcher Phone #:	AA Sequence (#)	Questel/Orbit Lexis/Nexis	
Searcher Colatinal  Date Searcher Picted Up: 1/21/05	C Stroeune (#)	WestlawWWW/Internet	
Date Searcher Patient Up 1/ 0/	Ribliographic	ln-house sequence systems	
Date Complete . 40	Litigation	Commercial Obgomer Secreturing Interference SPDI Encode/Fre Other (specify)	gth ansl
Searcher Prog. & Revinus Truto	Fulltext	Other (specify)	
Online Time: 25	Other		



# STIC Search Report

# STIC Database Tracking Number: 171716

TO: Ben Sackey

Location: REM 5B31

**Art Unit: 1626** 

November 21, 2005

Case Serial Number: 10/698451

From: Kathleen Fuller Location: EIC 1700 REMSEN 4B28

Phone: 571/272-2505

Kathleen.Fuller@uspto.gov

### Search Notes

There were only 4 CA references for these compounds. CA does not seem to index them with the hydrogen missing on the carboxy group of the propanaminium.



=> FILE REG

FILE 'REGISTRY' ENTERED AT 16:50:20 ON 21 NOV 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 NOV 2005 HIGHEST RN 868524-25-8 DICTIONARY FILE UPDATES: 20 NOV 2005 HIGHEST RN 868524-25-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> FILE HCAPLU

FILE '<u>HCAPLUS'</u> ENTERED AT 16:50:30 ON 21 NOV 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 21 Nov 2005 VOL 143 ISS 22 FILE LAST UPDATED: 20 Nov 2005 (20051120/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D	QUE	
L6	2	SEA FILE=REGISTRY ABB=ON (C8H13O2S2.C7H16NO3.K/MF OR C8H13O2S2
		C7H16NO3.NA/MF)
L7	4	SEA FILE=REGISTRY ABB=ON C8H13O2S2.C7H16NO3/MF
L8	1	SEA FILE=HCAPLUS ABB=ON L6
L9	3	SEA FILE=HCAPLUS ABB=ON L7
L10	19	SEA FILE=REGISTRY ABB=ON THIOCTIC
L11	3	SEA FILE=REGISTRY ABB=ON L10 AND CARNITIN?
L12	2389	SEA FILE=REGISTRY ABB=ON 16.186.1/RID
L13	144	SEA FILE=REGISTRY ABB=ON L12 AND SALT
L14	30	SEA FILE=REGISTRY ABB=ON L13 AND AMINIUM
L15	10	GEA FILE=REGISTRY ABB=ON L14 AND PROPANAMINIUM
L16	2	EEA FILE=HCAPLUS ABB=ON L11
L17	3	EA FILE=HCAPLUS ABB=ON L15
L18	4	SEA FILE=HCAPLUS ABB=ON L8 OR L9 OR L16 OR L17
		only 4 CA references to
=> D	L18 BIB AB	IND HITSTR 1-4  Only 4 CA references to the Compounds
		The Compounds
L18	ANSWER 1 C	4 HCAPLUS COPYRIGHT 2005 ACS on STN

#### => D L18 BIB ABS IND HITSTR 1-4

AN 2005:1878 HCAPLUS

DN 142:86696

TI Treatment of skin damage using acetyl carnitine and lipoic acid

IN Perricone, Nicholas V.

PΑ

SO U.S. Pat. Appl. Publ., 8 pp.

CODEN: USXXCO

DT Patent

LA English

PAN.	PATENT NO.	KIND	DATE	ADDITION NO	DAME
	PAIENI NO.	KIND	DAIL	APPLICATION NO.	DATE
PI	US 2004265345	A1	20041230	US 2003-609777	20030630
PRAT	US 2003-609777		20030630	,	

A composition containing both acetyl carnitine and lipoic acid are topically AB applied to treat skin damage, such as contact dermatitis, atopic dermatitis, xerosis, eczema, rosacea, seborrhea, psoriasis, thermal and radiation burns, other types of skin inflammation, and aging. Typical compns. contain from about 0.025% to about 5%, more narrowly from about 0.5% to about 2% by weight acetyl carnitine, and from about 0.1% to about %, more narrowly from about 0.25% to about 5% lipoic acid or lipoic acid derivative in a dermatol. acceptable carrier that contains phosphatidylcholine. Many embodiments also contain at least one adjunct ingredient such as tyrosine, a fatty acid ester of ascorbic acid such as ascorbyl palmitate, a  $\alpha$ -hydroxy acid such as glycolic acid, and/or folic acid. A preferred embodiment contains acetyl carnitine, lipoic acid, and tyrosine.

IC ICM A61K031-385

ICS A61K031-205; A61K031-375; A61K031-198

INCL 424401000; 514440000; 514554000; 514474000; 514557000; 514567000

1-12 (Pharmacology)

Section cross-reference(s): 63

ST skin damage treatment acetyl carnitine lipoate compn

IT Skin, disease

> (aging, treatment of; treatment of skin damage using acetyl carnitine and lipoic acid)

IT Radiation

```
(damage, burns, treatment of; treatment of skin damage using acetyl
        carnitine and lipoic acid)
IT
     Skin, disease
        (damage; treatment of skin damage using acetyl carnitine and lipoic
        acid)
IT
     Skin, disease
        (dry, xerosis, treatment of; treatment of skin damage using acetyl
        carnitine and lipoic acid)
     Carboxylic acids, biological studies
IT
     RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
     THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (hydroxy, composition further containing; treatment of skin damage using acetyl
        carnitine and lipoic acid)
     Drug delivery systems
TΤ
        (ointments, creams; treatment of skin damage using acetyl carnitine and
        lipoic acid)
     Acids, biological studies
TΤ
     RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
     THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (oxo, composition further containing; treatment of skin damage using acetyl
        carnitine and lipoic acid)
     Skin, disease
IT
        (rosacea, treatment of; treatment of skin damage using acetyl carnitine . -
        and lipoic acid)
IT
     Burn
        (thermal and radiation, treatment of; treatment of skin damage using
        acetyl carnitine and lipoic acid)
     Drug delivery systems
TT
        (treatment of skin damage using acetyl carnitine and lipoic acid)
IT
     Lecithins
     Phosphatidylcholines, biological studies
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (treatment of skin damage using acetyl carnitine and lipoic acid)
IT
     Dermatitis
     Eczema
     Psoriasis
     Seborrhea
        (treatment of; treatment of skin damage using acetyl carnitine and
        lipoic acid)
IT
     50-81-7D, Ascorbic acid, fatty acid esters
                                                 59-30-3, Folic acid,
     biological studies 60-18-4, L-Tyrosine, biological studies 79-14-1,
     Glycolic acid, biological studies 137-66-6, Ascorbyl palmitate
     RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
     THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (composition further containing; treatment of skin damage using acetyl carnitine
        and lipoic acid)
     462-20-4, Dihydrolipoic acid 462-20-4D, Dihydrolipoic acid, esters,
IT
     amides, salts 1077-28-7, dl-Lipoic acid 1077-28-7D, dl-Lipoic acid,
     derivs., esters, amides, salts 3040-38-8, L-Acetyl carnitine
     14992-62-2, Acetyl carnitine 816416-95-2 816416-96-3
     816416-97-4 816416-98-5
     RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
     THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (treatment of skin damage using acetyl carnitine and lipoic acid)
IT
    816416-95-2 816416-96-3 816416-98-5
     RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
     THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (treatment of skin damage using acetyl carnitine and lipoic acid)
RN
     816416-95-2 HCAPLUS
CN
     1-Propanaminium, 2-(acetyloxy)-3-carboxy-N,N,N-trimethyl-, inner salt,
```

SACKEY 10/698451 11/21/2005

Page 4

mixt. with 1,2-dithiolane-3-pentanoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 14992-62-2 CMF C9 H17 N O4

OAc | Me<sub>3</sub>+N-CH<sub>2</sub>-CH-CH<sub>2</sub>-CO<sub>2</sub>-

CM 2

CRN 1077-28-7 CMF C8 H14 O2 S2

S (CH<sub>2</sub>)<sub>4</sub>-CO<sub>2</sub>H

RN 816416-96-3 HCAPLUS
CN 1-Propanaminium, 2-(acetyloxy)-3-carboxy-N,N,N-trimethyl-, inner salt,
(2R)-, mixt. with 1,2-dithiolane-3-pentanoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 3040-38-8 CMF C9 H17 N O4

Absolute stereochemistry.

CM 2

CRN 1077-28-7 CMF C8 H14 O2 S2

S (CH<sub>2</sub>)<sub>4</sub>-CO<sub>2</sub>H

RN 816416-98-5 HCAPLUS
CN L-Tyrosine, mixt. with 2-(acetyloxy)-3-carboxy-N,N,N-trimethyl-1propanaminium inner salt and 1,2-dithiolane-3-pentanoic acid (9CI) (CA
INDEX NAME)

CM 1

CRN 14992-62-2 CMF C9 H17 N O4

CM 2

CRN 1077-28-7 CMF C8 H14 O2 S2

CM 3

CRN 60-18-4 CMF C9 H11 N O3

Absolute stereochemistry. Rotation (-).

L18 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:905631 HCAPLUS

DN 141:384305

TI Basic salt of thioctic acid with L-carnitine

IN Salvi, Annibale; Villani, Flavio; Nardi, Antonio; De Angelis, Bruno

PA Italy

SO U.S. Pat. Appl. Publ., 5 pp.

CODEN: USXXCO

DT Patent

LA English

FAN CNT 1

FAN.CNT 1																		
	PATENT NO.				KIND DATE		APPLICATION NO.				DATE							
							-									-		
ΡI	US	2004	2148	79		A1		2004	1028	1	US 2	003-	6984	51		2	0031	103
	WO	WO 2004094403 A1				2004	WO 2003-EP12179				20031031							
		W:	ΑE,	AG,	AL,	AM,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	ΒZ,	CA,	CH,
			CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
			GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	ΚP,	KR,	ΚZ,	LC,
			LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NI,	NO,

ST

IT

IT

IT

IT

IT

IT

IT

IT

RN

CN

```
NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
             ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRAI IT 2003-MI831
                         Α
                               20030422
     A process for the preparation of a salt of thioctic acid with L-carnitine is
     disclosed: Thioctic acid (50.5 g) are dissolved in 750 mL Me Et ketone at
     20-25° and a solution of 15.5 g KOH pellets (0.249 mol) and 39.5 g
     (0.245 mol) L-carnitine in 200 mL MeOH are added dropwise in 15-20 min.
     The solution is heated to 30-35° and the solvent is distilled to reach an
     internal volume of 330-350 mL. After complete distillation 600 mL of Me Et ketone
     are added and the mixture is left 25-30° for 30 min. Thioctic
     carnitine potassium salt (77 g) is obtained.
     ICM A61K031-385
     ICS C07D339-02
INCL 514440000; 549039000
     63-6 (Pharmaceuticals)
     Section cross-reference(s): 18
     thioctic acid carnitine salt prepn; diet supplement thioctic acid
     carnitine salt prepn; pharmaceutical thioctic acid carnitine salt prepn
     Alcohols, uses
     RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
    process); PYP (Physical process); PROC (Process); USES (Uses)
        (C1-5; preparation of salt of thioctic acid with carnitine)
    Drug delivery systems
        (preparation of salt of thioctic acid with carnitine)
     Esters, uses
     RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
    process); PYP (Physical process); PROC (Process); USES (Uses)
        (preparation of salt of thioctic acid with carnitine)
        (supplements; preparation of salt of thioctic acid with carnitine)
     248914-30-9P, (R)-(+)-Thioctic acid salt with L-carnitine
     248914-32-1P, (S)-(-)-Thioctic acid salt with L-carnitine
     248914-34-3P, Thioctic acid salt with L-carnitine
     784200-62-0P 784200-63-1P 784200-65-3P
     784200-67-5P
    RL: FFD (Food or feed use); SPN (Synthetic preparation); THU (Therapeutic
    use); BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of salt of thioctic acid with carnitine)
    75-05-8, Acetonitrile, uses
    RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
    process); PYP (Physical process); PROC (Process); USES (Uses)
        (preparation of salt of thioctic acid with carnitine)
    541-15-1, L-Carnitine 1077-28-7, Thioctic acid
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of salt of thioctic acid with carnitine)
    248914-30-9P, (R)-(+)-Thioctic acid salt with L-carnitine
    248914-32-1P, (S)-(-)-Thioctic acid salt with L-carnitine
    248914-34-3P, Thioctic acid salt with L-carnitine
    784200-62-0P 784200-63-1P 784200-65-3P
    784200-67-5P
    RL: FFD (Food or feed use); SPN (Synthetic preparation); THU (Therapeutic
    use); BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of salt of thioctic acid with carnitine)
    248914-30-9 HCAPLUS
    1-Propanaminium, 3-carboxy-2-hydroxy-N,N,N-trimethyl-, (2R)-,
     (3R)-1,2-dithiolane-3-pentanoate (salt) (9CI) (CA INDEX NAME)
```

CM 1

CRN 248914-37-6 CMF C8 H13 O2 S2

Absolute stereochemistry. Rotation (+).

CM 2

CRN 44984-08-9 .CMF C7 H16 N O3

Absolute stereochemistry. Rotation (-):

RN 248914-32-1 HCAPLUS

1-Propanaminium, 3-carboxy-2-hydroxy-N,N,N-trimethyl-, (2R)-, (3S)-1,2-dithiolane-3-pentanoate (salt) (9CI) (CA INDEX NAME)

CM 1

CN

CRN 248914-39-8

CMF C8 H13 O2 S2

'Absolute stereochemistry. Rotation (-).

CM 2

CRN 44984-08-9 CMF C7 H16 N O3

Absolute stereochemistry. Rotation (-).

RN 248914-34-3 HCAPLUS

The state of the s

CN 1-Propanaminium, 3-carboxy-2-hydroxy-N,N,N-trimethyl-, (2R)-, 1,2-dithiolane-3-pentanoate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 44984-08-9 CMF C7 H16 N O3

Absolute stereochemistry. Rotation (-).

CM 2

CRN 1077-29-8 CMF C8 H13 O2 S2

RN 784200-62-0 HCAPLUS

CN 1-Propanaminium, 3-carboxy-2-hydroxy-N,N,N-trimethyl-, (2R)-, 1,2-dithiolane-3-pentanoate, monopotassium salt (9CI) (CA INDEX NAME)

CM 1

CRN 248914-34-3

CMF C8 H13 O2 S2 . C7 H16 N O3

CM 2

CRN 44984-08-9

CMF C7 H16 N O3

Absolute stereochemistry. Rotation (-).

CM 3

CRN 1077-29-8 CMF C8 H13 O2 S2

S 
$$(CH_2)_4 - CO_2$$

RN784200-63-1 HCAPLUS

1-Propanaminium, 3-carboxy-2-hydroxy-N,N;N-trimethyl-, (2R)-, CN 1,2-dithiolane-3-pentanoate, monosodium salt (9CI) (CA INDEX NAME)

> CM 1

248914-34-3 CRN

C8 H13 O2 S2 . C7 H16 N O3 CMF

> CM 2

CRN 44984-08-9

CMF C7 H16 N O3

Absolute stereochemistry. Rotation (-).

CM 3

CRN 1077-29-8 CMF C8 H13 O2 S2

$$\begin{array}{c} S \\ S \\ \end{array} \begin{array}{c} (CH_2)_{4} - CO_2 - CO$$

RN 784200-65-3 HCAPLUS

1-Propanaminium, 3-carboxy-2-hydroxy-N,N,N-trimethyl-, inner salt, (2R)-, CN compd. with magnesium 1,2-dithiolane-3-pentanoate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 710351-22-7

CMF C8 H14 O2 S2 . 1/2 Mg

●1/2 Mg

B

CM 2

CRN 541-15-1 CMF C7 H15 N O3

Absolute stereochemistry. Rotation (-).

RN 784200-67-5 HCAPLUS

CN 1-Propanaminium, 3-carboxy-2-hydroxy-N,N,N-trimethyl-, inner salt, (2R)-, compd. with calcium 1,2-dithiolane-3-pentanoate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 710351-21-6 CMF C8 H14 O2 S2 . 1/2 Ca

●1/2 Ca

CM 2

CRN 541-15-1 CMF C7 H15 N O3

Absolute stereochemistry. Rotation (-).

```
L18 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN
AN
     1999:708603 HCAPLUS
     131:317793
DN
     Use of \alpha-lipoic acid to reduce appetite and/or body weight
TI
     Dean, Joan; Schuhbauer, Hans; Von Seyerl, Joachim; Pischel, Ivo; Weiss,
IN
     Stefan
PA
     SKW Trostberg A.-G., Germany
     PCT Int. Appl., 24 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LΑ
     German
FAN.CNT 1
     PATENT NO.
                         KIND
                                  DATE
                                              APPLICATION NO.
                                                                       DATE
                          ----
                                  -----
PΙ
     WO 9955331
                           A1
                                  19991104
                                               WO 1999-EP2776
                                                                        19990423
         W: CA, CZ, HU, JP, NO, PL, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
              PT, SE
     DE 19818563
                            A1
                                  19991028
                                              DE 1998-19818563
     DE 19818563
                            C2
                                  20030417
PRAI DE 1998-19818563
                           Α
                                  19980425
os
     MARPAT 131:317793
AΒ
     The invention relates to the use of R-\alpha-lipoic acid and/or
     S-\alpha-lipoic acid and/or one of its physiol. biocompatible salts to
     reduce appetite and/or body weight, at a preferred daily dose of between 10 mg and 10 g of the free acid form. Recommended single doses are between
     10 mg and 5 g of either \alpha-lipoic acid variant and are administered
     orally, especially to patients with a body mass index (BMI) >25 kg/m2,
     preferably in the form of a nutritional supplement as part of an
     antiobesity therapy.
     ICM A61K031-385
IC
     1-10 (Pharmacology)
CC
     Section cross-reference(s): 18, 63
ST
     lipoic acid appetite body wt redn; obesity treatment nutritional
     supplement lipoic acid
IT
     Amino acids, biological studies
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (basic, \alpha-lipoic acid salts; \alpha-lipoic acid to reduce
        appetite and/or body weight)
IT
     Amines, biological studies
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (cyclic, \alpha-lipoic acid salts; \alpha-lipoic acid to reduce
        appetite and/or body weight)
TT
     Amines, biological studies
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (diamines, \alpha-lipoic acid salts; \alpha-lipoic acid to reduce
        appetite and/or body weight)
IT
     Nutrition, animal
        (nutritional supplement; α-lipoic acid to reduce appetite and/or
        body weight)
IT
     Drug delivery systems
        (oral; α-lipoic acid to reduce appetite and/or body weight)
IT
     Amines, biological studies
```

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

( $\alpha$ -lipoic acid salts;  $\alpha$ -lipoic acid to reduce appetite and/or body weight)

IT Antiobesity agents

Appetite depressants

Body weight

( $\alpha$ -lipoic acid to reduce appetite and/or body weight)

IT Alkali metal salts

Alkaline earth salts

Salts, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

 $(\alpha\text{-lipoic acid}; \alpha\text{-lipoic acid to reduce appetite and/or body weight)}$ 

IT 1077-27-6, S- $\alpha$ -Lipoic acid 1077-27-6D, S- $\alpha$ -Lipoic acid, 1077-28-7, 1,2-Dithiolane-3-pentanoic acid 1077-28-7D, 1,2-Dithiolane-3-pentanoic acid, salts 1200-22-2, R-α-Lipoic acid 1200-22-2D, R-α-Lipoic acid, salts 14358-90-8 94599-85-6 176110-59-1 176110-60-4 137314-40-0 176110-58-0 176110-61-5 176110-66-0 176110-67-1 176110-68-2 176110-69-3 176110-75-1 176110-76-2 176110-79-5 176110-80-8 248913-97-5 248913-98-6 248913-99-7 248914-00-3 248914-01-4 248914-02-5 248914-03-6 248914-04-7 248914-05-8 248914-06-9 248914-07-0 248914-08-1 248914-09-2 248914-10-5 248914-11-6 248914-12-7 248914-13-8 248914-18-3 248914-14-9 248914-15-0 248914-16-1 248914-17-2 248914-19-4 248914-22-9 248914-25-2 248914-29-6 **248914-30-9** 248914-32-1 248914-34-3 248914-36-5 248914-38-7 248914-41-2 248914-40-1 248914-42-3 248914-43-4 248914-44-5 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

 $(\alpha$ -lipoic acid to reduce appetite and/or body weight)

IT 248914-30-9 248914-32-1 248914-34-3

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

 $(\alpha$ -lipoic acid to reduce appetite and/or body weight)

RN 248914-30-9 HCAPLUS

1-Propanaminium, 3-carboxy-2-hydroxy-N,N,N-trimethyl-, (2R)-, (3R)-1,2-dithiolane-3-pentanoate (salt) (9CI) (CA INDEX NAME)

CM 1

CN

CRN 248914-37-6 CMF C8 H13 O2 S2

Absolute stereochemistry. Rotation (+).

CM 2

CRN 44984-08-9 CMF C7 H16 N O3

Absolute stereochemistry. Rotation (-).

RN 248914-32-1 HCAPLUS

CN 1-Propanaminium, 3-carboxy-2-hydroxy-N,N,N-trimethyl-, (2R)-, (3S)-1,2-dithiolane-3-pentanoate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 248914-39-8 CMF C8 H13 O2 S2

Absolute stereochemistry. Rotation (-).

CM 2

CRN 44984-08-9 CMF C7 H16 N O3

Absolute stereochemistry. Rotation (-).

RN 248914-34-3 HCAPLUS

CN 1-Propanaminium, 3-carboxy-2-hydroxy-N,N,N-trimethyl-, (2R)-, 1,2-dithiolane-3-pentanoate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 44984-08-9 CMF C7 H16 N O3

Absolute stereochemistry. Rotation (-).

CM 2

CRN 1077-29-8 CMF C8 H13 O2 S2

# RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1967:520167 HCAPLUS

DN 67:120167

TI Betaine or caritine thioctate for treatment of hepatic and anoretic complaints

PA Centre d'Etudes et de Realisations Therapeutiques (C.E.R.E.T.)

SO Fr. M., 3 pp. CODEN: FMXXAJ

DT Patent

LA French

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 4512		19661121	FR	19650518

PI FR 4512 19661121 FR 19650518

AB The salts are obtained by the reaction of thioctic acid with betaine or carnitine hydrate. The LD50 (white mice) of betaine thioctate (I) is 0.45 g./kg. by intraperitoneal and 5.6 g./kg. by oral application; the LD50 of carnitine thioctate (II) is 0.35 g./kg. by intraperitoneal and 3.8 g./kg. by oral application. The two products have hepato-protective and bioenergetic properties. They are effective against all hepatic insufficiencies when used as tablets, capsules, or drinking solns., e.g. 0.25 g. I or II in 10 ml. distilled water.

IC A61K; C07C; D

CC 63 (Pharmaceuticals)

ST BETAINE THIOCTATE; CARNITINE THIOCTATE; LIVER INFECTION DRUG; APPETITE STIMULANT; BIOENERGETIC AGENT; HEPATO-PROTECTIVE AGENT; THIOCTIC ACID SALTS

IT Liver, diseases or disorders

(betaine or carnitine thioctate in treatment of)

IT **17747-20-5** 18428-73-4

RL: BIOL (Biological study)

(pharmaceutical compns. containing, in liver disorder treatment)

IT 17747-20-5

RL: BIOL (Biological study)

(pharmaceutical compns. containing, in liver disorder treatment)

RN 17747-20-5 HCAPLUS

CN Ammonium, (3-carboxy-2-hydroxypropyl)trimethyl-, 1,2-dithiolane-3-valerate (8CI) (CA INDEX NAME)

CM 1

CRN 44985-71-9 CMF C7 H16 N O3 SACKEY 10/698451 11/21/2005

Page 15

$$\begin{array}{c} & \text{OH} \\ | \\ \text{Me}_3\text{+N--CH}_2\text{--CH-CH}_2\text{--CO}_2\text{H} \end{array}$$

CM 2

CRN 1077-29-8 CMF C8 H13 O2 S2